Supplementary Table S1. Investigated anthropometric parameters and physical fitness components. 2

Investigated Parameters	Equipment	Protocol
Anthropometric parameters		
Body circumferences		
Mid-upper arm circumference (cm)	Anthropometric tape (0.1 cm resolution) [a]	ISAK [1]
Waist circumference (cm)	Anthropometric tape (0.1 cm resolution) [a]	ISAK [1]
Hip circumference (cm)	Anthropometric tape (0.1 cm resolution) [a]	ISAK [1]
Body skinfolds		
Triceps skinfold (mm)	Caliper (0.01 mm resolution) [b]	ISAK [1]
Subscapular skinfold (mm)	Caliper (0.01 mm resolution) [b]	ISAK [1]
Abdominal skinfold (mm)	Caliper (0.01 mm resolution) [b]	ISAK [1]
Calf skinfold (mm)	Caliper (0.01 mm resolution) [b]	ISAK [1]
Bone diameters		
Humeral diameter (cm)	Digital caliper (0.1 mm resolution) [c]	ISAK [1]
Femoral diameter (cm)	Digital caliper (0.1 mm resolution) [c]	ISAK [1]
Calculated anthropometric parameters		
Waist-to-hip ratio	NA	NA
Waist-to-height ratio	NA	NA
Sum of four skinfolds (mm) [d]	NA	NA
Sum of diameters (cm) [e]	NA	NA
Physical fitness components		
Body composition		
Fat mass (kg)	DXA equipment [f]	Manufacture recommendations
Fat mass (%)	DXA equipment [f]	Manufacture recommendations
Fat-free mass (kg)	DXA equipment [f]	Manufacture recommendations
BMC (g)	DXA equipment [f]	Manufacture recommendations
BMD (g/cm^2)	DXA equipment [f]	Manufacture recommendations
Cardiorespiratory fitness		
VO2peak (ml.kg-1.min-1)	Cycle ergometer and gas analyzer [g]	Previously established protocol [2]
Muscle strength/endurance		
Handgrip strength (kg)	Hydraulic handgrip dynamometer [h]	CPAFLA [3]
Abdominal endurance (reps/min)	Polar® S610i	Fitnessgram [4]
Stand Broad Jump (cm)	Tape measure (0.1 cm resolution) [a]	Previously established protocol [5]
Modified Push-ups (reps/min)	Polar® S610i	CPAFLA [3]
Flexibility		
Lower back flexibility (cm)	Wells bench [a]	CPAFLA [3]

[a] Sanny®, Sao Paulo, Brazil; [b] Cescorf®, Porto Alegre, Brazil; [c] Digimess®, Sao Paulo, Brazil; ISAK: 3
International Society for the Advancement of Kinanthropometry, NA: not applicable; [d] Sum of four 4
skinfolds: sum of triceps, subscapular, abdominal and calf skinfolds; [e] Sum of diameters: sum of 5
humeral and femoral diameters; DXA: dual energy X-ray absorptiometry; [f] Study I: GE® Lunar 6
Prodigy Advance and EnCore 2004 software version 8.10.027 (GE Lunar Corporation, Madison, WI, 7
USA), Study II: Hologic® Discovery Wi Fan-Beam - S/N 81593, pediatric software Hologic Auto 8
Whole-Body version 12.4:5 (HOLOGIC, Inc., Bedford, Massachusetts, EUA); BMC: bone mineral 9
content; BMD: bone mineral density; VO2peak: peak oxygen consumption; [g] Study I: Ergofit® 167 10
cycle ergometer (Toledo, Espain) and the K4bs gas analyzer (COSMED, Rome, Italy), Study II Lode 11
Excalibur Sport cycle ergometer (Groningen, Netherlands) and the COSMED Quark CPET gas ana- 12
lyzer (Rome, Italy); [h] Saehan® SH5001 (Saehan Corporation, Masan, Korea); CPAFLA: The Cana- 13
dian Physical Activity, Fitness, and Lifestyle Approach. 14

Supplementary Table S2. Study participants' characteristics.

Variables	Study I (n = 65) Mean (SD)	Study II (n = 21) Mean (SD)	Females (n =46) Mean (SD)	Males (n =40) Mean (SD)	Total (n=86) Mean (SD)
Age (months)	146.6 (25.6)	133.3 (28.8)	145.5 (26.0)	140.9 (28.1)	143.3 (26.9)
Heigh-for-age (z-score)	-0.5 (1.1)	-0.2 (1.0)	-0.5 (1.1)	-0.4 (1.0)	-0.5(1.1)
Weigh-for-age (z-score)	-0.2 (1.2)	-0.1 (0.8)	-0.1 (1.2)	-0.2 (1.0)	-0.1 (1.1)
BMI (z-score)	-0.2 (1.0)	0.4 (1.2) ‡	0.1 (0.9)	-0.3 (1.2)	-0.1 (1.1)
PAQ-c Score	2.4 (0.8)	2.6 (0.8)	2.3 (0.7)	2.7 (0.8) ‡	2.5 (0.8)
CD4 count (cells/uL)	857.6 (367.7)	1020.7 (410.3)	901.2 (404.5)	893.2 (360.8)	897.4 (382.6)
CD8 count (cells/uL)	1185.1 (547.9)	1039.3 (427.9)	971.7 (390.9)	1354.0 (581.9) ‡	1149.5 (522.5)
CD4/CD8 ratio	0.8 (0.4)	1.1 (0.4) ‡	1.0 (0.5) ‡	0.7 (0.3)	0.9 (0.4)
Time of ART (years)	-	7.8 (4.6)	9.0 (4.4)	6.5 (4.6)	-

Variables	Study I n (%)	Study II n (%)	Females n (%)	Males n (%)	Total N (%)
Sex					
Females	35 (53.8)	11 (52.4)	-	-	46 (53.5)
Males	30 (46.2)	10 (47.6)	-	-	40 (46.5)
Puberal stage (Tanner stages)					
Stage 1	15 (23.1)	5 (23.8)	9 (19.6)	11 (27.5)	20 (23.3)
Stage 2	20 (30.8)	8 (38.1)	13 (28.3)	15 (37.5)	28 (32.6)
Stage 3	19 (29.2)	5 (23.8)	19 (41.3) [+]	5 (12.5)	24 (27.9)
Stage 4	8 (12.3)	1 (4.8)	2 (4.3)	7 (17.5) [+]	9 (10.5)
Stage 5	3 (4.6)	2 (9.5)	3 (6.5)	2 (5.0)	5 (5.8)
BMI (WHO grow charts)					
Thinness	2 (3.1)	1 (4.8)	0 (0.0)	3 (7.5)	3 (3.5)
Eutrophic	55 (84.6)	15 (71.4)	38 (82.6)	32 (80.0)	70 (81.4)
Overweight	7 (10.8)	3 (14.3)	6 (13.0)	4 (10.0)	10 (11.6)
Obesity	1 (1.5)	2 (9.5)	2 (4.3)	1 (2.5)	3 (3.5)
Physical activity level					
Met PA Guidelines	36 (55.4)	16 (76.2)	25 (54.3)	27 (67.5)	52 (60.5)
Didn't meet PA Guidelines	29 (44.6)	5 (23.8)	21 (45.7)	13 (32.5)	34 (39.5)
Viral load (copies/mL)					
TND or LDL (≤20 or ≤40)	44 (67.7%)	20 (95.2%)	36 (78.3)	28 (70.0)	64 (74.4%)
41 – 1000	9 (13.8%) [+]	1 (4.8%)	4 (8.7)	6 (15.0)	10 (11.6%)
>1000	12 (18.5%) [+]	0 (0.0%)	6 (13.0)	6 (15.0)	12 (14.0%)
Immunosuppression status					
Severe immunosuppression	2 (3.1%)	0 (0.0%)	1 (2.2)	1 (2.5)	2 (2.3%)
Moderate	7 (10.8%)	2 (9.5%)	6 (13.0)	3 (7.5)	9 (10.5%)
Non-immunosuppressed	56 (86.2%)	19 (90.5%)	39 (84.8)	36 (90.0)	75 (87.2%)
ART use					
ART with PI	39 (60.0 %) [+]	6 (28.6%)	21 (45.7)	24 (60.0)	45 (52.3%)
ART without PI	15 (23.1%)	15 (71.4%)	19 (41.3)	11 (27.5)	30 (34.9%)
Without ART	11 (16.9%) [+]	0 (0.0%)	6 (13.0)	5 (12.5)	11 (12.8%)

* SD: standard deviation; BMI: body mass index; PAQ-C Score: physical activity questionnaire for older children final score; CD4 count: CD4 lymphocytes cell count; CD8 count: CD8 lymphocytes cell count; ART: antiretroviral therapy; WHO: World Health Organization; PA: physical activity; TND: target not detected; LDL: lower than detectable limit; PI: protease inhibitor ‡ independent variables *t*-test p-value < 0.05; [+] Chi-squared test p-value < 0.05.

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